

Title (en)

INTRADERMAL DELIVERY OF VACCINES AND GENE THERAPEUTIC AGENTS VIA MICROCANNULA

Title (de)

INTRADERMALE FREISETZUNG VON VAKZINEN UND GENTHERAPEUTISCHEN MITTELN MIT EINER MIKROKANÜLE

Title (fr)

DISTRIBUTION INTRADERMIQUE DE VACCINS ET D'AGENTS THERAPEUTIQUES GENIQUES VIA UNE MICROCANNULE

Publication

EP 1416986 A4 20051214 (EN)

Application

EP 02763212 A 20020701

Priority

- US 0220780 W 20020701
- US 30147601 P 20010629
- US 4450402 A 20020110

Abstract (en)

[origin: WO03002069A2] Methods and devices for administration of vaccines and gene therapeutic agents into the intradermal layer of skin.

IPC 1-7

A61M 5/00

IPC 8 full level

C12N 15/09 (2006.01); **A61K 39/00** (2006.01); **A61K 39/02** (2006.01); **A61K 39/12** (2006.01); **A61K 39/145** (2006.01); **A61K 47/36** (2006.01); **A61K 47/46** (2006.01); **A61K 48/00** (2006.01); **A61M 5/158** (2006.01); **A61M 5/32** (2006.01); **A61M 5/46** (2006.01); **A61M 37/00** (2006.01); **A61P 31/04** (2006.01); **A61P 31/12** (2006.01); **A61P 31/16** (2006.01); **A61P 37/06** (2006.01); **A61B 17/20** (2006.01); **A61D 7/00** (2006.01); **A61M 5/28** (2006.01)

CPC (source: EP US)

A61K 39/00 (2013.01 - EP US); **A61K 39/12** (2013.01 - EP US); **A61K 39/145** (2013.01 - EP US); **A61M 5/158** (2013.01 - EP US); **A61M 37/0015** (2013.01 - EP US); **A61P 31/04** (2018.01 - EP); **A61P 31/12** (2018.01 - EP); **A61P 31/16** (2018.01 - EP); **A61P 37/06** (2018.01 - EP); **A61B 17/205** (2013.01 - EP US); **A61D 7/00** (2013.01 - EP US); **A61K 2039/5252** (2013.01 - EP US); **A61K 2039/53** (2013.01 - EP US); **A61K 2039/54** (2013.01 - EP US); **A61K 2039/545** (2013.01 - EP US); **A61K 2039/55566** (2013.01 - EP US); **A61K 2039/55572** (2013.01 - EP US); **A61M 5/46** (2013.01 - EP US); **A61M 37/00** (2013.01 - EP US); **A61M 2037/0061** (2013.01 - EP US); **A61M 2202/0445** (2013.01 - EP US); **C12N 2760/16134** (2013.01 - EP US); **Y02A 50/30** (2018.01 - EP US)

Citation (search report)

- [X] EP 1092444 A1 20010418 - BECTON DICKINSON CO [US]
- [PX] WO 0202179 A1 20020110 - BECTON DICKINSON CO [US], et al
- [PX] WO 0232454 A1 20020425 - SMITHKLINE BEECHAM BIOLOG [BE], et al
- [E] WO 02067983 A1 20020906 - SMITHKLINE BEECHAM BIOLOG [BE], et al
- [E] WO 02087494 A2 20021107 - GLAXOSMITHKLINE BIOLOG SA [BE], et al
- [E] WO 02083216 A1 20021024 - BECTON DICKINSON CO [US], et al
- [E] WO 02074336 A2 20020926 - SMITHKLINE BEECHAM BIOLOG [BE], et al
- [X] DEGANO P ET AL: "Intradermal DNA immunization of mice against influenza A virus using the novel PowderJect<@> system", VACCINE, BUTTERWORTH SCIENTIFIC, GUILDFORD, GB, vol. 16, no. 4, February 1998 (1998-02-01), pages 394 - 398, XP004099300, ISSN: 0264-410X
- [X] HAENSLER J ET AL: "Intradermal DNA immunization by using jet-injectors in mice and monkeys", VACCINE, BUTTERWORTH SCIENTIFIC, GUILDFORD, GB, vol. 17, no. 7-8, 26 February 1999 (1999-02-26), pages 628 - 638, XP004154800, ISSN: 0264-410X
- [X] RAZ E ET AL: "INTRADERMAL GENE IMMUNIZATION: THE POSSIBLE ROLE OF DNA UPTAKE IN THE INDUCTION OF CELLULAR IMMUNITY TO VIRUSES", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, DC, US, vol. 91, no. 20, 27 September 1994 (1994-09-27), pages 9519 - 9523, XP002021792, ISSN: 0027-8424
- [X] HELLER RICHARD ET AL: "Intradermal delivery of interleukin-12 plasmid DNA by in vivo electroporation", DNA AND CELL BIOLOGY, vol. 20, no. 1, January 2001 (2001-01-01), pages 21 - 26, XP002349362, ISSN: 1044-5498

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

WO 03002069 A2 20030109; WO 03002069 A3 20030814; BR 0210628 A 20040810; CA 2451816 A1 20030109; CN 1253220 C 20060426; CN 1520318 A 20040811; EP 1416986 A2 20040512; EP 1416986 A4 20051214; JP 2004531578 A 20041014; MX PA03011611 A 20040701; US 2002198509 A1 20021226; US 2004131641 A1 20040708; US 7473247 B2 20090106

DOCDB simple family (application)

US 0220780 W 20020701; BR 0210628 A 20020701; CA 2451816 A 20020701; CN 02812823 A 20020701; EP 02763212 A 20020701; JP 2003508311 A 20020701; MX PA03011611 A 20020701; US 18571702 A 20020701; US 67903803 A 20031002